

# Chapter 1: Setting the Stage

*This "Chapter 1" is original to Massachusetts Health Care Trends: 1990-1999.*

**H**ealth care, together with education and computer technology, is what Massachusetts is known for throughout the world. We import students and patients and export college graduates, new doctors and healthier people. Health care is labor intensive and therefore, expensive. But, it provides jobs which are, in

general, well-paying and accompanied by benefits, including health insurance. We capture a large portion of federal research dollars which are similarly beneficial to our economy and with them we invent technologies, pharmaceuticals, and processes that we export internationally. It's an important business to those who make a living within it, to those who live here and benefit first by its discoveries and to the rest of the world to whom its benefits soon accrue.

We are a small state, better educated than most, older, and more likely to be employed with higher per capita income than the rest of the nation. Massachusetts also has a higher proportion of Caucasians than the United States as a whole, but we are changing and benefiting from other racial and ethnic groups who invigorate the labor pool, challenge some of our ideas, and hopefully will further our tradition of excellence in health care.

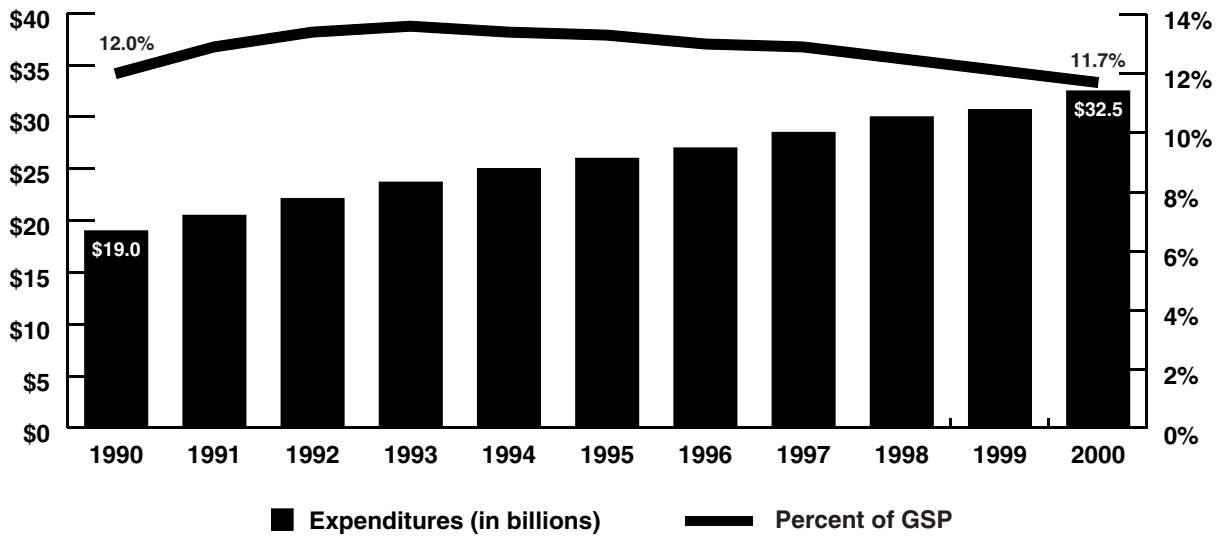
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## Massachusetts Health Care Expenditures and Percent of Gross State Product (1990-2000)



**Figure 1.1**

- Estimated total personal health care expenditures\* in Massachusetts increased by 71% from \$19.0 billion in 1990 to \$32.5 billion in 2000. The average annual rate of increase was 5.5% between 1990 and 2000.
- The share of Gross State Product (GSP) accounted for by health expenditures rose from 12.0% in 1990 to the peak point of 13.6% in 1993. This GSP share gradually and consistently went down since 1993 and reached the bottom point 11.7% in 2000.

Sources: "Massachusetts Personal Health Care Expenditures (PHCE), All Payers 1980-2000" Centers for Medicare & Medicaid Services (CMS), Office of the Actuary, National Health Statistics Group <http://www.cms.hhs.gov/statistics/nhe/state-estimates-provider/2000/states.pdf>.

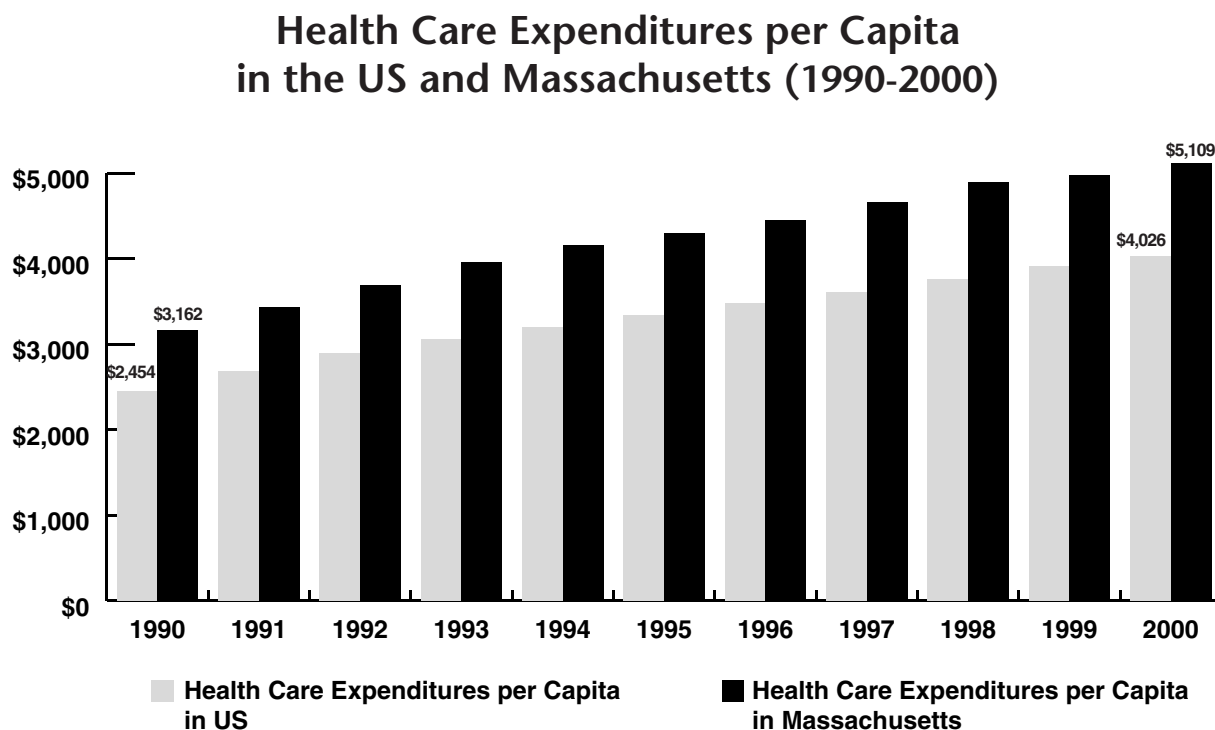
"Regional Accounts Data, Gross State Product," US Department of Commerce, Bureau of Economic Analysis, [www.bea.doc.gov](http://www.bea.doc.gov).

Levit, K. et al, *Health Care Financing Review*, "State Health Expenditure Accounts: Building Blocks for State Health Spending Analysis," Fall 1995.

Notes: CMS updates state-level health care expenditure data every five years.

These numbers have not been adjusted for inflation.

The specific health care expenditure measure used in this report is defined as personal health care expenditures (PHCE) in the State Health Expenditure Accounts (SHEA). This measure includes spending on therapeutic goods or services rendered to treat or prevent a specific disease or condition in a person, but leaves out some other spending categories, such as medical research and construction. The comprehensive total health care expenditure data at the state level are not currently available. All the monetary measures used in this report are not inflation adjusted.



**Figure 1.2**

- Per capita health expenditures in Massachusetts were 27% higher than the national average in 2000, and 29% higher in 1990. The rate of increase in per capita health expenditures in Massachusetts was close to the US rate from 1990 to 2000—64% versus 62%. Therefore, the relative difference in this per capita expenditure measure between Massachusetts and the nation was fairly stable over this period.

Source: For Massachusetts personal health care expenditures see Figure 1.1.

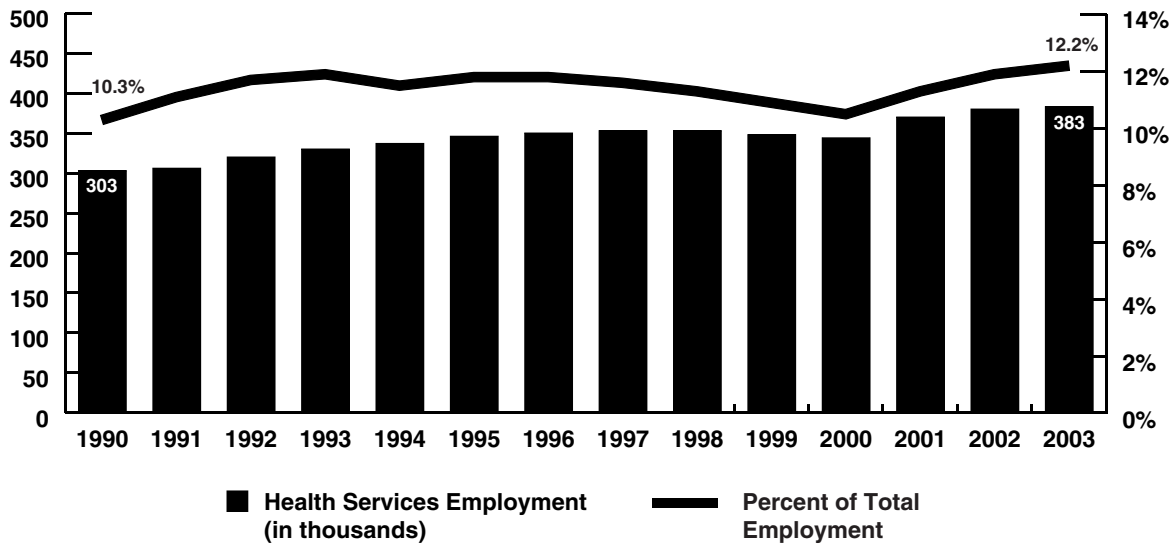
For population data see Figure 1.6.

U.S. personal health care expenditures: <http://www.cms.hhs.gov/statistics/nhe/historical/t2.asp>.

Notes: CMS updates state-level health care expenditure data every five years.

These numbers have not been adjusted for inflation.

## Health Services Employment and Percent of Total Employment in Massachusetts (1990-2003)

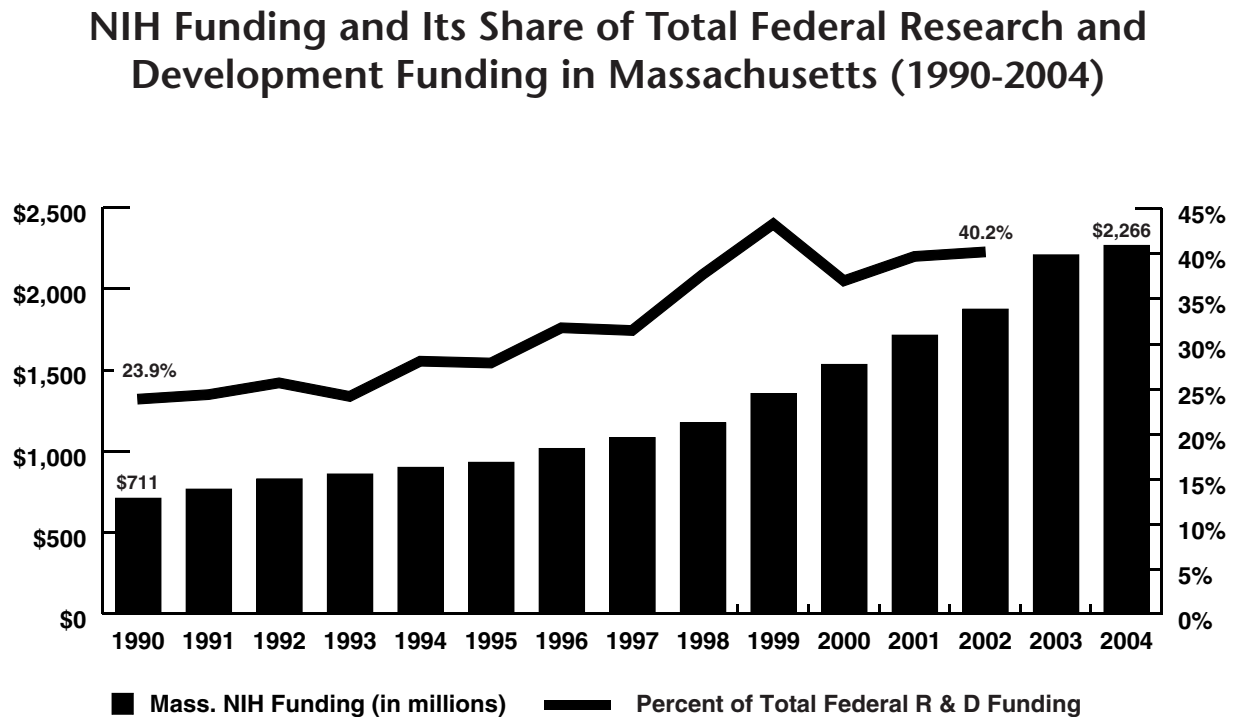


**Figure 1.3**

- Employment in the Massachusetts health services sector has steadily increased since 1990 from 302,679 employees in 1990 to 383,236 in 2003, an increase of 26.6%. The share of health care workers compared to total employees in the state was highest at 12.2% in 2003.

Source: Massachusetts Division of Employment and Training, [www.detma.org](http://www.detma.org).

Note: The specific employment measure used in this report covers various health services fields in both private and public sectors, such as hospitals, physician offices, and long-term care facilities. This measure has left out some health care related employment, such as the health insurance industry, the drug and medical instruments industries, and biomedical companies. It is difficult to clearly identify these employment areas under the current statistical system.



**Figure 1.4**

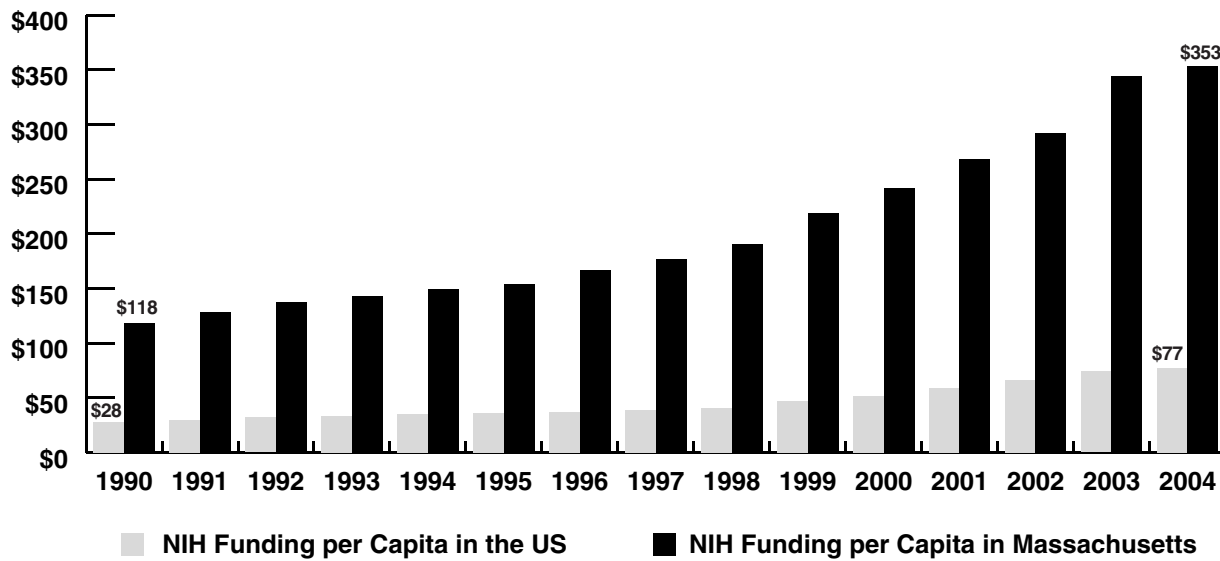
- Massachusetts received \$2.3 billion in medical research funding from the National Institutes of Health (NIH) in 2004, 3.2 times the 1990 funding of \$711 million. In 2004, Massachusetts trailed only California in the total dollar amount of medical research funding received from NIH (\$3.6 billion in California) despite having a far smaller population.
- Of all the research and development funding received in Massachusetts from the federal government in 2002, NIH funding accounted for 40%, a substantial increase from 24% in 1990. NIH-funded research for universities and teaching hospitals provides important financial support for the health services, biotechnology, medical devices industries, and medical education in Massachusetts.

Source: National Institute of Health and National Science Foundation; 1990-1993 NIH funding data are estimated based on "NIH Support to the Top 100 Cities."

Note: These numbers have not been adjusted for inflation.

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## NIH Funding per Capita in the US and Massachusetts (1990-2004)

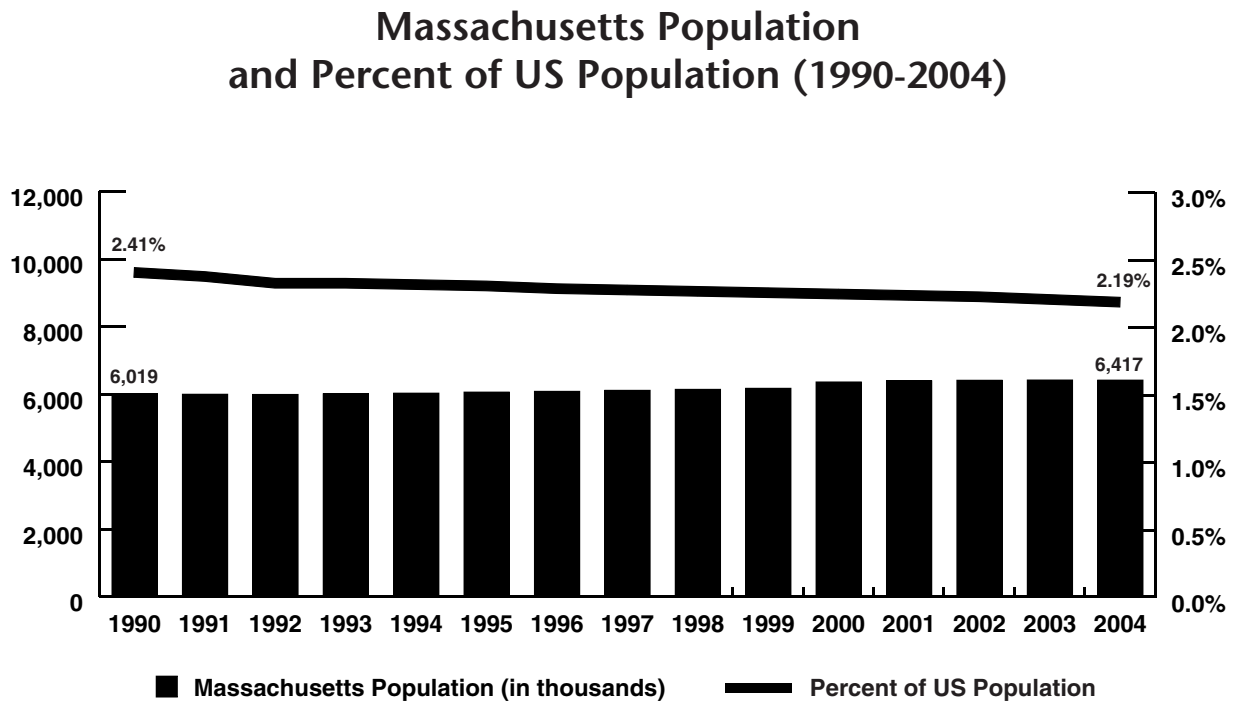


**Figure 1.5**

- NIH funding per capita in Massachusetts was far above the national average in 2004—4.6 times the national average. Per capita NIH funding for Massachusetts increased substantially—almost three times, from \$118 in 1990 to \$353 in 2004.

Source: National Institute of Health; 1990-1993 NIH funding data are estimated based on "NIH support to the Top 100 Cities," US Bureau of Census.

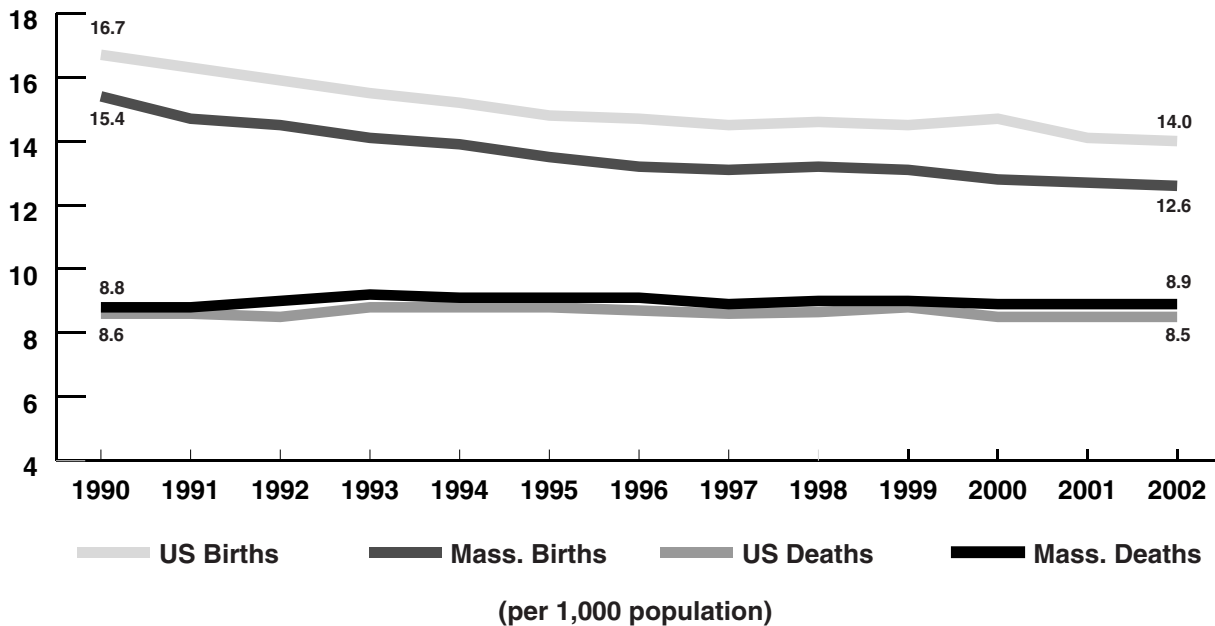
Note: These numbers have not been adjusted for inflation.

**Figure 1.6**

- Massachusetts experienced a population growth of 6.6% between 1990 and 2004, but was the only state to lose population in 2004. Since this growth rate was smaller than the national average, the proportion of the Massachusetts population relative to total US population diminished over this period.
- Massachusetts has almost exactly one fiftieth of the United States population.

Source: US Bureau of Census.

## Births and Deaths per 1,000 Population in the US and Massachusetts (1990-2002)



**Figure 1.7**

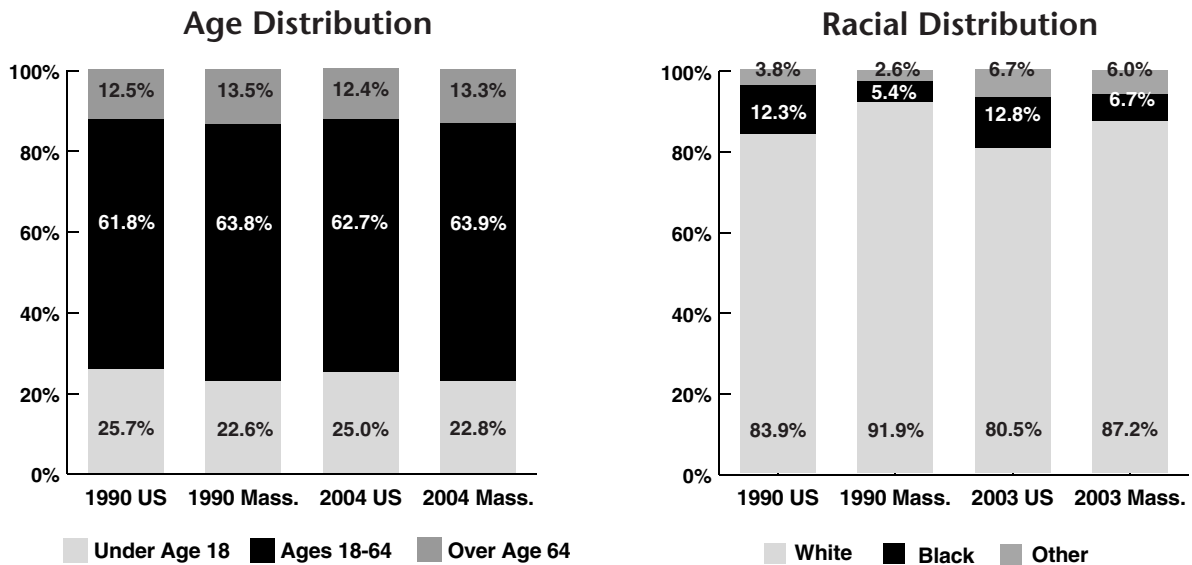
- Between 1990 and 2002 Massachusetts consistently had both a lower birth rate and a higher death rate than the rest of the country, which contributed to the lower population growth in Massachusetts compared to the national average.

Sources: *Health, United States* (various years), US Department of Health and Human Services.

*Advance Data Births and Advance Data Deaths*, Massachusetts Department of Public Health.

US Bureau of Census.

## Population Distribution by Age and Race in the US and Massachusetts (1990-2004)



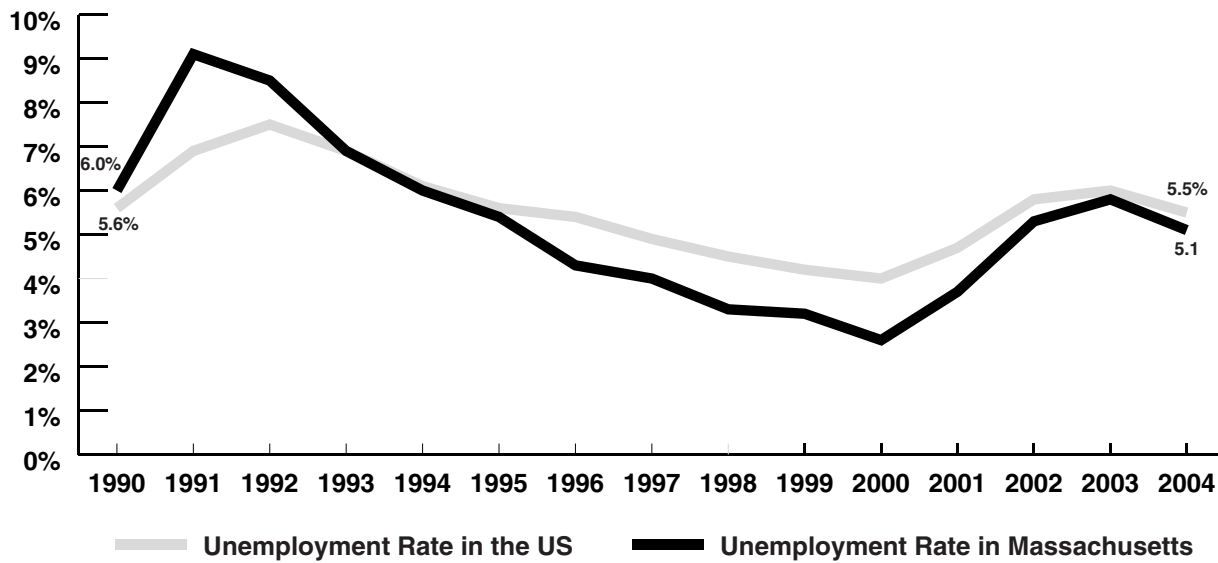
**Figure 1.8**

- The age distribution of the Massachusetts population has been fairly stable since 1990. The population under age 18 comprised a smaller share of the state population than the national average in both 1990 and 2004.
- Massachusetts had a significantly larger proportion of whites than the nation overall, but the Commonwealth's minority population increased slightly in all categories between 1990 and 2003.

Source: US Bureau of Census.

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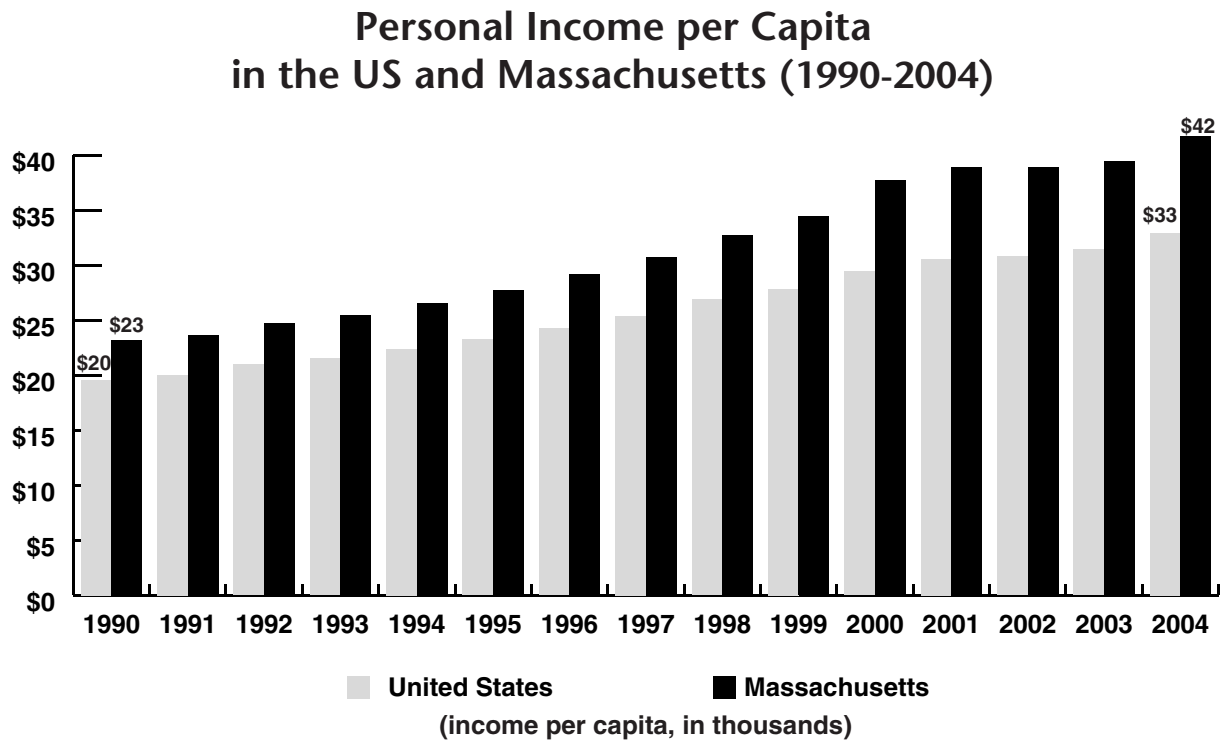
## Unemployment Rate in the US and Massachusetts (1990-2004)



**Figure 1.9**

- The unemployment rate in Massachusetts followed the national trend between 1990 and 2004. It reached a peak of 9.1% in 1991 and went as low as 2.6% in 2000. In most years, the unemployment rate in Massachusetts was lower than the national average, but the difference between the US and Massachusetts rates has narrowed in recent years.

Source: US Department of Labor, Bureau of Labor Statistics.



**Figure 1.10**

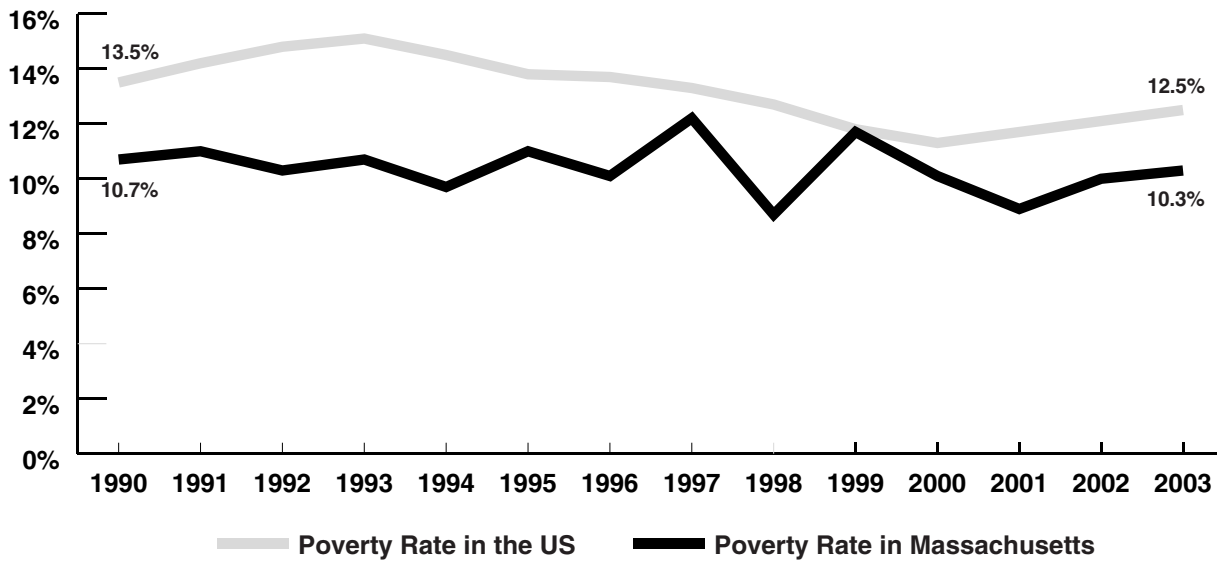
- Between 1990 and 2004, per capita personal income in Massachusetts rose gradually, resulting in an 80% increase. This rate of increase was higher than the national trend, which saw a 68% increase.

Source: US Department of Commerce, Bureau of Economic Analysis.

Note: These numbers have not been adjusted for inflation.

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## Poverty Rate in the US and Massachusetts (1990-2003)

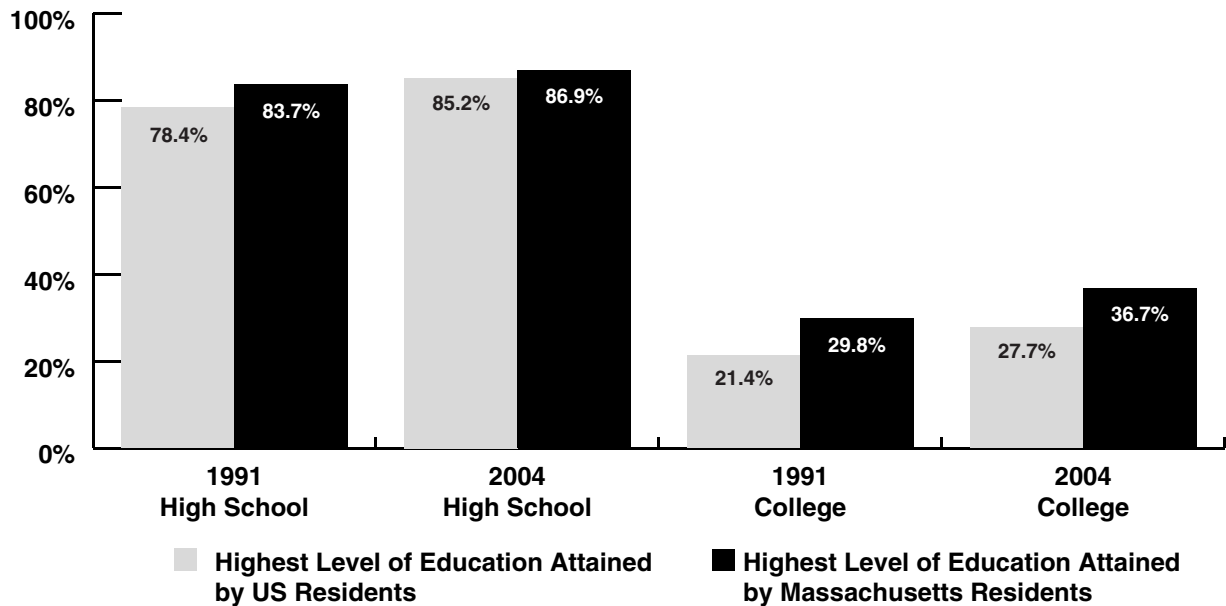


**Figure 1.11**

- Although the unemployment rate dropped substantially and personal income increased in Massachusetts during the 1990s, the Commonwealth's poverty rate did not show a substantial decline until 1998 (from 12.2% in 1997 to 8.7% in 1998) before climbing substantially in 1999.
- Massachusetts had a lower poverty rate than the national average between 1990 and 2003. However, the definition of federal poverty line is consistent throughout the US while the cost of living in Massachusetts is substantially above the US average.

Source: US Bureau of Census.

## Highest Level of Education Attained by Persons Ages 25 and Over in the US and Massachusetts (1991 and 2004)



**Figure 1.12**

- In 1991 and 2004, the proportion of Massachusetts adults (ages 25 and over) who graduated from high school or college was higher than the national average.

Source: US Bureau of Census.

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